REMARKS

Claims 1 and 14 are amended herein. Support for the amendment is found, for example at page 20, lines 6-10 of the specification. No new matter is presented.

I. Response to Claim Rejection under 35 U.S.C. § 102

Claims 1-23 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U. S. Patent No. 6,919,158 (Kawamura et al).

Without conceding the merits of the rejection, claims 1 and 14 are amended herein to recite that the pattern forming method of the present invention comprises image-wise forming a region over the whole area of a substrate and then image-wise exposing to light to inactivate the polymerization-initiating ability of the initiator in the region exposed to light so that the initiator fixed on the region not exposed to light maintains its activity.

One of the important technical features of the present invention is to form a "region where an initiator having an ability to initiate polymerization is image-wise fixed" on the surface of the substrate. Due to this feature and the characteristics of the formed graft polymer, the present invention can exhibit superior effects, such as 1) easily obtaining a pattern having uniform quality, excellent sharpness, and function according to a substance adhered to the pattern, on only a desired region of a substrate, and 2) obtaining high adhesiveness between the substrate and the graft polymer owing to a direct chemical bonding between the substrate and the formed graft polymer.

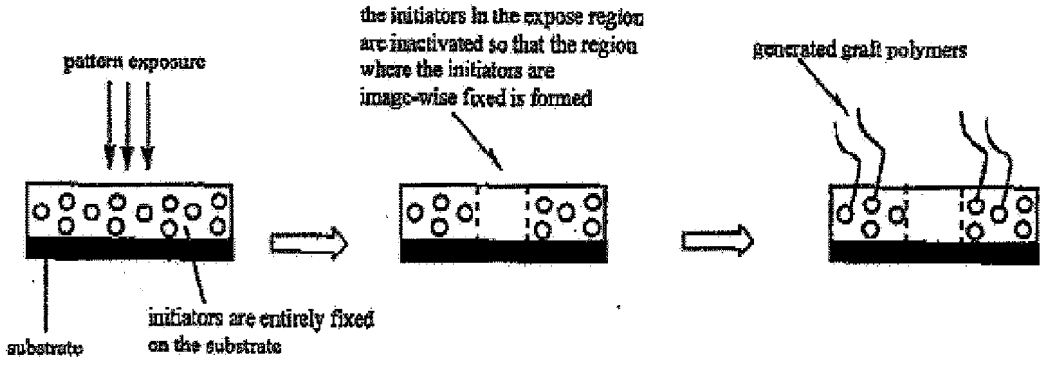
In the present invention, in order to form the above region on the substrate, methods such as those explained on page 19, line 20, to page 20, line 12 may be employed. Among these, a method which involves inactivating the initiator is a particularly preferable embodiment.

An important point of these methods is that they can form not only a "region where an initiator having an ability to initiate polymerization is image-wise fixed" that can generate a graft polymer, but can also form a "region where an initiator does not exist", that cannot generate a graft polymer.

As explained at page 20, lines 6 to 10 of the present specification, when the method which involves inactivating the initiator is employed, the initiating ability of the initiator existing in the image-wise exposed region is inactivated, so that the unexposed region where the initiator is image-wise fixed maintains its initiating ability.

That is, the exposed region where the initiator is inactivated (i.e. the region where the initiator does not exist any more) cannot generate the graft polymers, and only the unexposed region where the initiator is existed can form the graft polymers. Applicants provide the following illustration for the Examiner's consideration.

Preferable Embodiment of the Present Invention



The above-described preferable embodiment clearly indicates that both the "region where an initiator having an ability to initiate polymerization is image-wise fixed" and the "region where an initiator does not exist" are formed on the substrate, and the graft polymers can be generated on the former region only.

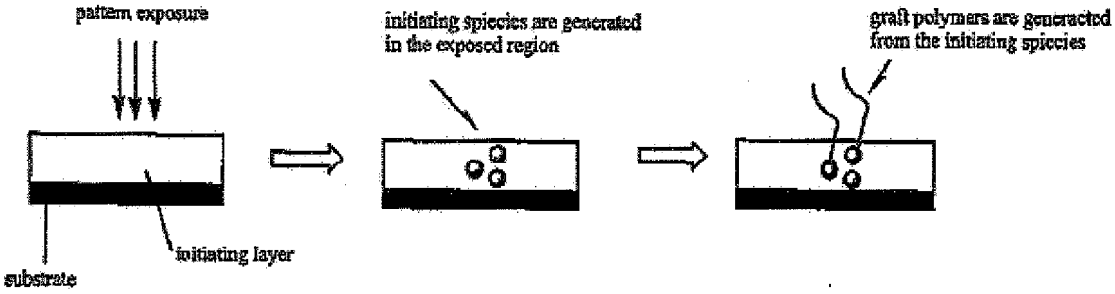
As a result, a pattern having the excellent effects of the invention (e.g. sharpness) can be easily obtained since the inactivated region (i.e. the exposed region in which the initiator does not exist) can not generate a graft polymer. This is also supported by the comparison of the Examples and Comparative Example 2 described in the specification.

Further, please note that the "initiator having an ability to initiate polymerization" of the present invention does not mean an initiating species itself (such as a radical) but a compound that has the ability to initiate polymerization. This is also clearly supported in the specification.

By contrast, Kawamura (U.S. Patent No. 6919158) discloses a completely different pattern forming method from the present invention. When the initiating layer of Kawamura is exposed to light, the initiating species are generated only in the exposed region, and then the

graft polymers are generated from the initiating species in the exposed region, not the unexposed region. Moreover, there is no doubt that the unexposed region of the initiating layer of Kawamura still has an initiating ability, since the initiator containing the initiating layer is not inactivated. Applicants provide the following illustration of the process of Kawamura, which is different from the presently claimed process.

Kawamura



It is clear from the above that the techniques of the present invention and those disclosed in Kawamura are completely different from each other. Accordingly, Applicants submit that Kawamura does not teach or suggest a "region where an initiator having an ability to initiate polymerization is image-wise fixed over the whole area of the substrate and then image-wise exposing to light to inactivate the polymerization-initiating ability of the initiator in the region exposed to light so that the initiator fixed on the region not exposed to light maintains its activity" as recited in present claims 1 and 14 as amended.

Thus, Kawamura et al does not disclose all elements of the present claims and can not be said to anticipate the present invention. Withdrawal of the rejection under 35 U.S.C. § 102 is respectfully requested.

II. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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23373
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Date: August 27, 2007